

ENGINEERING REPORT

for

Contract DACW-33-81-C0030

Work Order Number 7

Environmental Sampling at the Bourne Bridge

Bourne, Massachusetts



BRIGGS

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Chain of custody log

Figure 1 Sample Location Map - North Side

Figure 2 Sample Location Map - South Side

Appendix A Field Exploration Logs

1.1 AUTHORIZATION

The work reported herein was performed under contract DACW-33-81-C-0030, Work Order No. 7 dated 31 March 1981.

1.2 PURPOSE

The purpose of this work was to obtain approximately 60 sediment samples for environmental testing from twenty locations at the northern and southern abutments of the Bourne Bridge in Bourne, MA as shown on the attached Figure 1 and Figure 2. To accomplish this work 60 hand samples were obtained at 3 depths at each of the twenty locations.

1.3 SCOPE OF INVESTIGATION

Sediment samples were taken at locations as shown on Figure 1 on Wednesday, 22 April 1981. The twenty sampling locations were as outlined in the specification and located in the field by taping. The bridge abutments were used as reference points for locating all the sampling locations. Ten of the sampling locations were located on the northern side of the canal and ten were located on the southern side of the canal. Two deviations from the originally planned sampling locations were required for locations SBEL and SDEL since they fell on the asphalt surface of the access road. SBEL was moved from an offset distance of 40 feet from the bridge to 66 feet from the bridge. SDEL was moved from an offset distance of 40 feet from the bridge to 20 feet from the bridge. The lateral spacing of the samples remained as planned. Three samples were taken at each location at three depths; surface to one inch, three to six inches, and nine to twelve inches. The field exploration logs for all the samples are included as Appendix A to this report.

1.4 QUALITY ASSURANCE

We hereby certify that the following equipment and sampling procedures were used to perform the sampling outlined in this report:

Equipment

Soil Sampling:

All soil sampling was conducted using a hand shovel. The retrieved samples were placed in 3 1/2 inch diameter by 3 1/2 inch high screw top glass jars.

Sampling Procedure:

The sampling locations for environmental sampling were located by taping distances from known existing field locations using a minimum of three ties. Sampling at each location was done at the three depths previously mentioned and the jars and exploration logs were marked as shown below to identify both the sample location and depth:

| <u>Sample Location</u> | <u>Depth</u> |
|------------------------|--------------|
| SAWA-1 | 0" - 1" |
| SAWA-2 | 3" - 6" |
| SAWA-3 | 9" -12" |

A chain of custody log documenting the custody between sampling, storage, and delivery to the NED Laboratory in Waltham MA is included with this report. Sampling and storage procedures were carefully monitored by our on-site Quality Assurance inspector, Mr. Ronald Bukowski, to insure strict adherence to the specifications.

All sample jars were marked on the cover and tagged with labels containing the following information:

Project identification
Date of sampling
Sample location and designation
Sample depths



Certified 27 April 1981

A handwritten signature in black ink, appearing to read "David S. Campbell".

David S. Campbell P.E.
Massachusetts No. 29145

BRIGGS ENGINEERING CORPORATION

Chain of Custody Log

Project: Environmental Sampling - Bourne MA

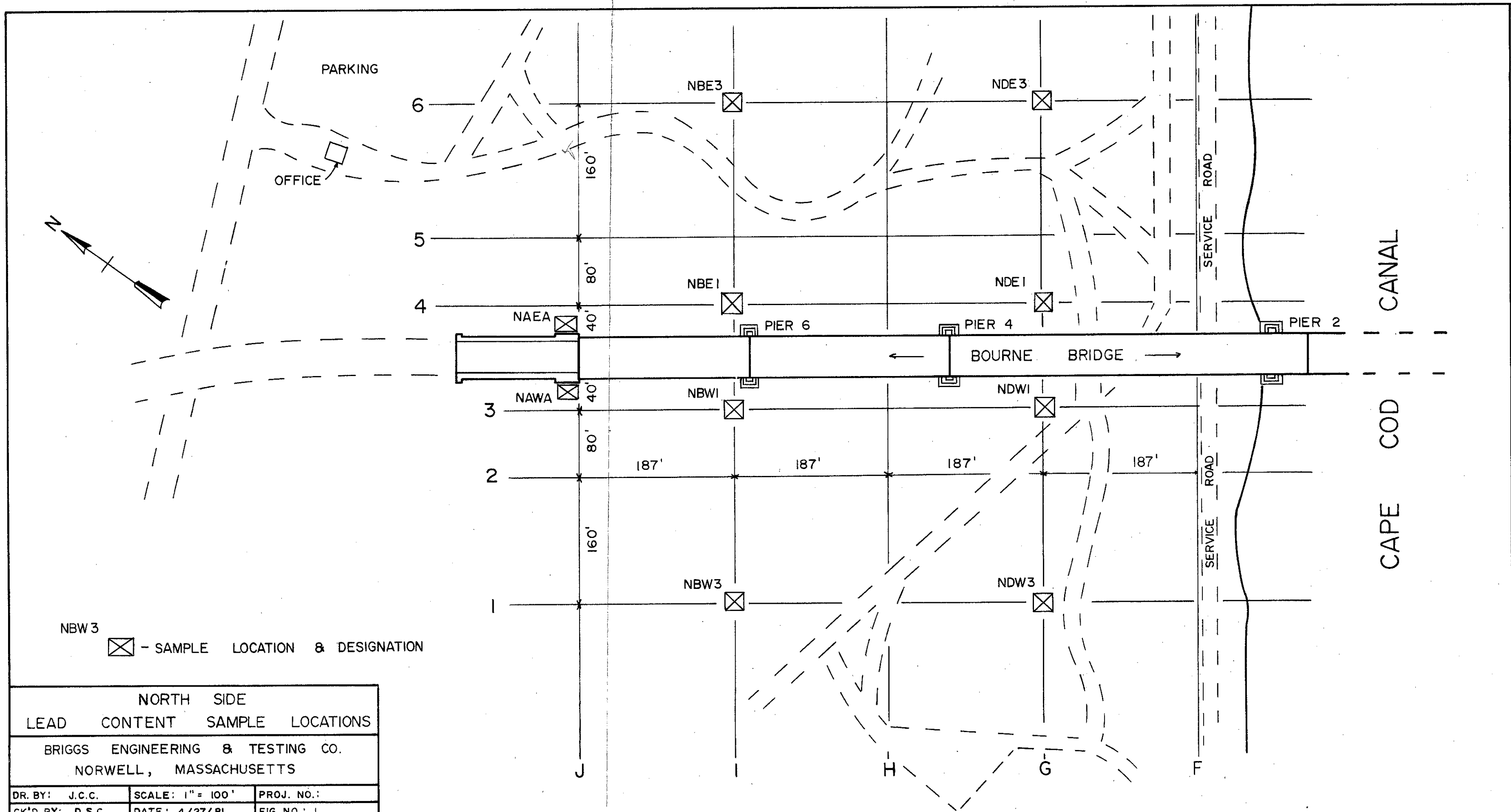
Items: Tubes none

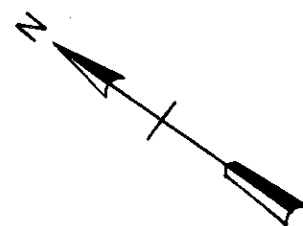
 Bottles none

 Jar Samples sixty (60)

 Field Logs sixty (60)

| <u>Date & Time Received</u> | <u>Date & Time Transferred</u> | <u>Comments</u> | <u>Custodian</u> |
|---------------------------------|------------------------------------|-----------------|--------------------|
| <u>as sampled</u> | <u>4/23/1981 - 0800 hrs</u> | <u></u> | <u>R. Bukowski</u> |
| <u>4/23/1981 - 0800 hrs</u> | <u>4/24/1981 - 1400 hrs</u> | <u></u> | <u>D. Campbell</u> |
| <u>4/24/1981 - 1400hrs</u> | <u></u> | <u>NED</u> | <u>JF Ruggen</u> |
| <u></u> | <u></u> | <u></u> | <u></u> |
| <u></u> | <u></u> | <u></u> | <u></u> |





CAPE COD CANAL

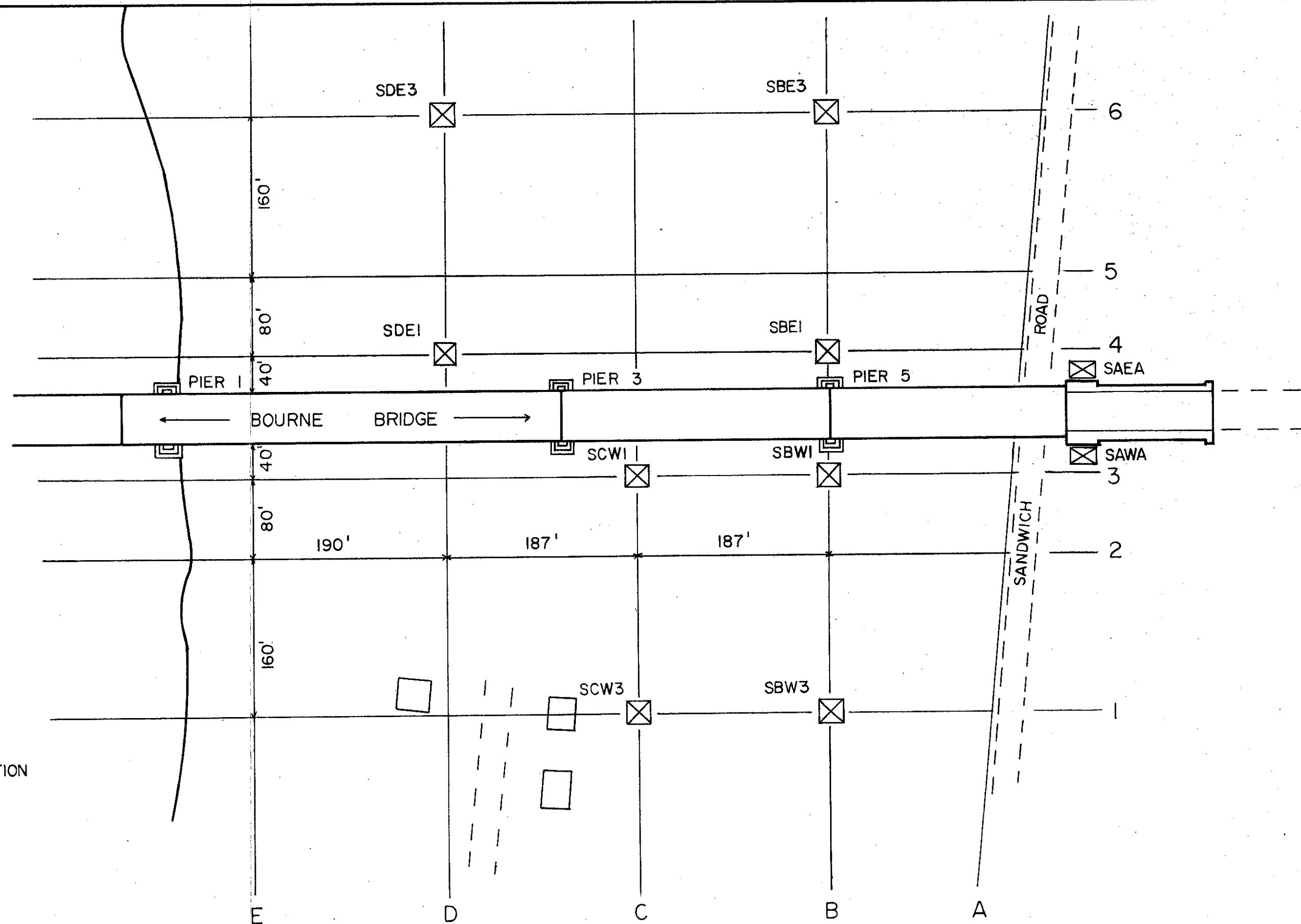
SCW3

☒ - SAMPLE LOCATION & DESIGNATION

SOUTH SIDE
LEAD CONTENT SAMPLE LOCATIONS

BRIGGS ENGINEERING & TESTING CO.
NORWELL, MASSACHUSETTS

| | | |
|-----------------|------------------|-------------|
| DR. BY: J.C.C. | SCALE: 1" = 100' | PROJ. NO.: |
| CK'D BY: D.S.C. | DATE: 4/27/81 | FIG. NO.: 2 |



APPENDIX A

Field Exploration Logs

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:

KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SAWA-1 DESIGNATION: SAWA-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐RANGES ☐SEXTANT ☐VISUAL ☐LORAN C ☐TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Topsoil: Grass, silty sand, coarse to fine sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE QUARTS DOD PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1450 REDOX SEA STATE: N/A BLACK = WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:

KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SAWA-2 DESIGNATION: SAWA-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐RANGES ☐SEXTANT ☐VISUAL ☐LORAN C ☐TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, C-F sand, 20-30% silt, less
than 5% gravelMATERIAL DEPTH: 3-6'SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE QUARTS DOD PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1453 REDOX SEA STATE: N/A BLACK =WEATHER CODE 02 WHITE =OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SAWA-3 DESIGNATION: SAWA-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, M-F sand, 30-40% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1455 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SAEA-1 DESIGNATION: SAEA-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Topsoil, grass, sand, M-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1442 REDOX SEA STATE: N/A BLACK =WEATHER CODE: 02 WHITE =OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SAEA-2 DESIGNATION: SAEA-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, C-F sand, 25-35% silt,
<5% gravelMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1444 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SAEA-3 DESIGNATION: SAEA-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, C-F sand, 30-40% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE ☐
QUARTS ☐ DOD ☐
PINTS ☐ SALINITY ☐JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1446 REDOX SEA STATE: N/A BLACK = WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBW3-1 DESIGNATION: SBW3-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: 1MATERIAL DESCRIPTION: Topsoil:sandy organic silt, C-F sand,
<5% gravelMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1551 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE: 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBW3-2 DESIGNATION: SBW3-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, M-F sand, 25-35% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1554 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE: 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBW3-3 DESIGNATION: SBW3-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, M-F sand, 25-35% silt,
<5% rootsMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1556 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:

KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBW1-1 DESIGNATION: SBW1-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐RANGES ☐SEXTANT ☐VISUAL ☐LORAN C ☐TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Loamey sand, C-F sand, grassMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE QUARTS DOD PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1510 REDOX SEA STATE: N/A BLACK = WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION
ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒

SAMPLE NO. SBW1-2 DESIGNATION: SBW1-2

COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒

SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLW

NUMBER OF ATTEMPTS: N/A

MATERIAL DESCRIPTION: Silty sand, C-F sand, 20-30% silt, 20-25%
M-F gravel

MATERIAL DEPTH: 3-6"

SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐

BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY

JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1512 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE: 02 WHITE =

OPERATIONAL DIFFICULTIES

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBW1-3 DESIGNATION: SBW1-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Gravelly sand, C-F sand, 20-30% M-F gravel
20-25% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1515 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBEL-1 DESIGNATION: SBEL-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: 1MATERIAL DESCRIPTION: Topsoil: silty sand, M-F sand, 15-20% siltMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1502 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBEL-2 DESIGNATION: SBEL-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, C-F sand, 20-30% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE
QUARTS ☐ DOD
PINTS ☐ SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1504 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBEL-2 DESIGNATION: SBEL-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, C-F sand, 20-30% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1504 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBEL-3 DESIGNATION: SBEL-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, C-F sand, 10-15% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE ☐
QUARTS ☐ DOD ☐
PINTS ☐ SALINITY ☐JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1506 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBE3-1 DESIGNATION: SBE3-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1614 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBE3-2 DESIGNATION: SBE3-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, F sandMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1615 REDOX SEA STATE: N/A BLACK =WEATHER CODE 02 WHITE =OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:

KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SBE3-3 DESIGNATION: SBE3-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, F sand, <5% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1617 REDOX SEA STATE: N/A BLACK =WEATHER CODE 02 WHITE =OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SCW3-1 DESIGNATION: SCW3-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sandy organic silt, 15-20% F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1601 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SCW3-2 DESIGNATION: SCW3-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sandy organic silt, 15-20% F sandMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE ☐
QUARTS ☐ DOD ☐
PINTS ☐ SALINITY ☐JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1603 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SCW3-3 DESIGNATION: SCW3-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, C-F sand, 20-30% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1605 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SCW1-1 DESIGNATION: SCW1-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Topsoil, silty sand, grass, M-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1532 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE: 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SCW1-2 DESIGNATION: SCW1-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, M-F sand, 15-20% silt
<10% F gravelMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1534 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SCW1-3 DESIGNATION: SCW1-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/ALEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: 1MATERIAL DESCRIPTION: Silty sand, M-F sand, 15-20% silt
<10% M-F gravelMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1538 REDOX SEA STATE: N/A BLACK =
WEATHER CODE: 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SDE1-1 DESIGNATION: SDE1-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: 1MATERIAL DESCRIPTION: Grass, silty sand, C-F sand, 15-25% siltMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1522 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SDE1-2 DESIGNATION: SDE1-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, M-F sand, 15-20% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1525 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SDE1-3 DESIGNATION: SDE1-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, M-F sandMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1527 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SDE3-1 DESIGNATION: SDE3-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Topsoil, silty sand, M-F sand, 20-30% siltMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1623 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SDE3-2 DESIGNATION: SDE3-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Topsoil, silty sand, F sand, 15-25% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1625 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. SDE3-3 DESIGNATION: SDE3-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/ALEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, F sand, 15-25% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1627 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDW1-1 DESIGNATION: NDW1-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, C-F sand, 15-25% siltMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1007 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:

KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDW1-2 DESIGNATION: NDW1-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐RANGES ☐SEXTANT ☐VISUAL ☐LORAN C ☐TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Gravelly sand, C-F sand, 25-35% M-F gravel
<10% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE QUARTS DOD PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1011 REDOX SEA STATE: N/A BLACK = WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:

KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDW1-3 DESIGNATION: NDW1-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐RANGES ☐SEXTANT ☐VISUAL ☐LORAN C ☐TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Gravelly sand, C-F sand, 15-20% M-F gravel
<10% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE QUARTS DOD PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1015 REDOX SEA STATE: N/A BLACK =WEATHER CODE 02 WHITE =OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDW3-1 DESIGNATION: NDW3-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, F sand, pine needlesMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE ☐
QUARTS ☐ DOD ☐
PINTS ☐ SALINITY ☐JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1023 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDW3-2 DESIGNATION: NDW3-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/ALEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, F sandMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1024 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDW3-3 DESIGNATION: NDW3-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, M-F sandMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1026 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDE1-1 DESIGNATION: NDE1-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand - Topsoil-Roots, C-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1136 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION
ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒

SAMPLE NO. NDE1-2 DESIGNATION: NDE1-2

COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒

SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLW

NUMBER OF ATTEMPTS: N/A

MATERIAL DESCRIPTION: Sandy gravel, M-F gravel, C-F sand,
<10% silt

MATERIAL DEPTH: 3-6"

SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐

BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY

JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1139 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDE1-3 DESIGNATION: NDE1-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Gravelly sand, C-F sand, 15-20% M-F gravelMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1143 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDE3-1 DESIGNATION: NDE3-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Topsoil: loamy sand, M-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1153 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDE3-2 DESIGNATION: NDE3-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand-roots, C-F sand, <10% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1155 REDOX SEA STATE: N/A BLACK =WEATHER CODE 02 WHITE =OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NDE3-3 DESIGNATION: NDE3-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, M-F sandMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1159 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBW3-1 DESIGNATION: NBW3-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Topsoil, grass, M-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1034 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBW3-2 DESIGNATION: NBW3-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sandy loam, 20-30% M-F sandMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1037 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:

KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBW3-3 DESIGNATION: NBW3-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sandy loam, 15-25% M-F sandMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1040 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBW1-1 DESIGNATION: NBW1-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Grass, M-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE ☐
QUARTS ☐ DOD ☐
PINTS ☐ SALINITY ☐JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1052 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBW1-2 DESIGNATION: NBW1-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, C-F sand, <5% roots, <5% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1055 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBW1-3 DESIGNATION: NBW1-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, M-F sand, <5% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE
QUARTS ☐ DOD
PINTS ☐ SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1057 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBEl-1 DESIGNATION: NBEl-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Topsoil, sandy loam, C-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1122 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBE1-2 DESIGNATION: NBE1-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, M-F sand, 10-15% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1127 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBEl-3 DESIGNATION: NBEl-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: 9", 1" stratum organic silt 10 to 12" sand
C-F sandMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1132 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBE3-1 DESIGNATION: NBE3-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Loamy sand, M-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE ☐
QUARTS ☐ DOD ☐
PINTS ☐ SALINITY ☐JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1206 REDOX SEA STATE: N/A BLACK = WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION
ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒

SAMPLE NO. NBE3-2 DESIGNATION: NBE3-2

COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒

SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLW

NUMBER OF ATTEMPTS: N/A

MATERIAL DESCRIPTION: Loamy sand, M-F sand, 20-30% organic silt
<5% F gravel

MATERIAL DEPTH: 3-6"

SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐

BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

| | | |
|-----------------|-----------------|---------------------|
| NUMBER: <u></u> | GALLONS <u></u> | TEMPERATURE <u></u> |
| | QUARTS <u></u> | DOD <u></u> |
| | PINTS <u></u> | SALINITY <u></u> |

| | | |
|-------------------------|-----------------------|---------------|
| JULIAN DATE: <u>112</u> | SECCHI DISC READINGS: | pH <u></u> |
| 24 hr TIME: <u>1208</u> | | REDOX <u></u> |
| SEA STATE: <u>N/A</u> | BLACK = <u></u> | |
| WEATHER CODE <u>02</u> | WHITE = <u></u> | |

OPERATIONAL DIFFICULTIES

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NBE3-3 DESIGNATION: NBE3-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Silty sand, M-F sand, 15-25% siltMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1212 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NAWA-1 DESIGNATION: NAWA-1COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Grass, sand, C-F sandMATERIAL DEPTH: 0-1"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1103 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLE NO. NAWA-2 DESIGNATION: NAWA-2

COORDINATES: NORTH N/A EAST

SOUNDING: _____ N/A _____
LEAD LINE _____
FATHOMETER _____
TIDEBOARD _____
TIDE TABLE _____
TIDE CURVE _____
REDUCED SOUNDING: _____ MLW

NUMBER OF ATTEMPTS: N/A

MATERIAL DESCRIPTION: Sand, C-F sand, <5% roots, <5% silt

MATERIAL DEPTH: 3-6"

SAMPLE DISPOSITION: BAG JAR X LINER DISCARD

BARREL LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

NUMBER: _____ GALLONS _____ TEMPERATURE _____
 QUARTS _____ DOD _____
 PINTS _____ SALINITY _____

JULIAN DATE: 112 SECCHI DISC READINGS: pH
 24 hr TIME: 1105 REDOX
 SEA STATE: N/A BLACK =
 WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES _____

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Ronald Bukoski

ENVIRONMENTAL EXPLORATION LOG

INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981

SAMPLER TYPE: KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒

SAMPLE NO. NAEA-1 DESIGNATION: NAEA-1

COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT

RANGES _____

SEXTANT

VISUAL

LORAN C _____

TAPING X

SOUNDING: N/A

LEAD LINE

FATHOMETER _____

TIDEBOARD

TIDE TABLE TIDE CURVE

REDUCED SOUNDING: _____ MLW

NUMBER OF ATTEMPTS: N/A

MATERIAL DESCRIPTION: Sand, C-F sand

MATERIAL DEPTH: 0-1"

SAMPLE DISPOSITION: BAG JAR X LINER DISCARD

BARREL LENGTH: _____ WEIGHT LBS: _____ FREE FALL: _____

WATER SAMPLES:

NUMBER: _____ GALLONS _____ TEMPERATURE _____

QUARTS _____ DOD _____

PINTS _____ SALINITY _____

JULIAN DATE: 112 SECCHI DISC READINGS: pH
 REFRACTIVITY: TEMPERATURE:

24 hr TIME: 1112 REDOX

SEA STATE: N/A BLACK =

WEATHER CODE 02 WHITE =

OPERATIONAL DIFFICULTIES

NO. OF SAMPLES SHIPPED: 1

INSPECTOR: Ronald Bukoski

INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NAEA-2 DESIGNATION: NAEA-2COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/ALEAD LINE ☐FATHOMETER ☐TIDEBOARD ☐TIDE TABLE ☐TIDE CURVE ☐REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Gravelly sand, C-F snd, 10-15% F gravel,
<10% siltMATERIAL DEPTH: 3-6"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

WATER SAMPLES:

NUMBER: GALLONS ☐ TEMPERATURE QUARTS ☐ DOD PINTS ☐ SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH 24 hr TIME: 1114 REDOX SEA STATE: N/A BLACK = WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

BRIGGS ENGINEERING CORPORATION

ENVIRONMENTAL EXPLORATION LOG

PROJECT: Bourne Bridge DATE: 22 April 1981SAMPLER TYPE:
KULLENBERG ☐ PISTON ☐ DREDGE ☐ CORE ☐ WATER ☐ OTHER ☒SAMPLE NO. NAEA-3 DESIGNATION: NAEA-3COORDINATES: NORTH N/A EAST

LOCATION METHOD:

TRANSIT ☐
RANGES ☐
SEXTANT ☐
VISUAL ☐
LORAN C ☐
TAPING ☒SOUNDING: N/A
LEAD LINE ☐
FATHOMETER ☐
TIDEBOARD ☐
TIDE TABLE ☐
TIDE CURVE ☐
REDUCED SOUNDING: MLWNUMBER OF ATTEMPTS: N/AMATERIAL DESCRIPTION: Sand, C-F sandMATERIAL DEPTH: 9-12"SAMPLE DISPOSITION: BAG ☐ JAR ☒ LINER ☐ DISCARD ☐BARREL LENGTH: WEIGHT LBS: FREE FALL:

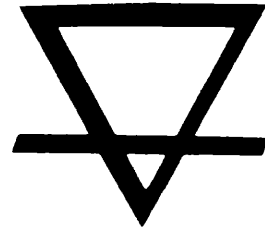
WATER SAMPLES:

NUMBER: GALLONS TEMPERATURE
QUARTS DOD
PINTS SALINITY JULIAN DATE: 112 SECCHI DISC READINGS: pH
24 hr TIME: 1117 REDOX
SEA STATE: N/A BLACK =
WEATHER CODE 02 WHITE = OPERATIONAL DIFFICULTIES NO. OF SAMPLES SHIPPED: 1INSPECTOR: Ronald Bukoski

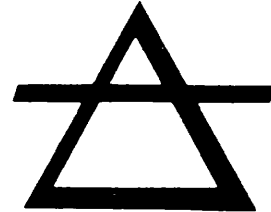


In ancient times
Greek and Hindu philosophers
believed that there were
four elements in the material universe
— EARTH, AIR, FIRE and WATER.

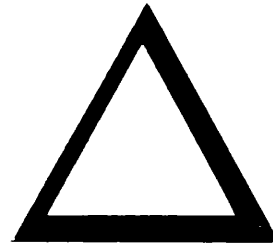
Over the years
man's knowledge has expanded
and the world of materials
is now known to be extremely complex.
The unravelling of these complexities
is the continuing goal of
Briggs Engineering & Testing Company.



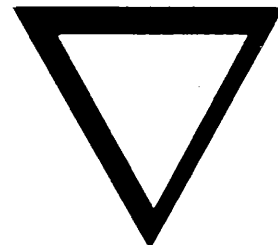
EARTH



AIR



FIRE



WATER

BRIGGS

Engineering and Testing

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Telephone (617) 773-2780

